




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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,241	03/01/2004	Eric Chen-Li Sheng	TRAN-P281	3620
7590 09/01/2004 WAGNER, MURABITO & HAO LLP Two North Market Street, Third Floor San Jose, CA 95113			EXAMINER HOLLINGTON, JERMELE M	
			ART UNIT 2829	PAPER NUMBER

DATE MAILED: 09/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/791,241	Applicant(s) SHENG ET AL.	
	Examiner Jermele M. Hollington	Art Unit 2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-20 is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: on page 1, line 5, after the words "Serial Number" insert --10/791,459--, on page 1, line 6, after the words "filed on" insert --March 1, 2004--, on page 1, line 11, after the words "Serial Number" insert --10/791,099--, on page 1, line 12, after the words "filed on" insert --March 1, 2004--.

Appropriate correction is required.

2. Applicants are reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because the range of the abstract is not over 50 words as stated above. Correction is required. See MPEP § 608.01(b).

Claim Objections

4. Claim 4 is objected to because of the following informalities: in line 1 of claim 4, the limitation "a voltage supply" should be changed to --the voltage supply-- in order to limit a duplicant positive recitation in the claimed since claim 4 depends from claim 1. Appropriate correction is required.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-14 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of copending Application No. 10/791,459.

Regarding claims 1-14 of this application, claim 1 of this application corresponds to claims 1 and 15 of U.S. Application 10/791,459, claim 2 of this application corresponds to claims 2 and 16 of the other application stated above, claim 3 corresponds to claims 3 and 17 of the other application, claim 4, corresponds to claims 4 and 18, claim 5 corresponds to claims 5 and 19, claim 6 corresponds to claims 6 and 20, claim 7 corresponds to claims 7 and 21, claim 8 corresponds to claims 8 and 22, claims 9-14 corresponds to claims 9-14 of U.S. Application 10/791,459. Although the conflicting claims are not identical, they are not patentably distinct from each other because the scope of the claims 1-14 of this application covers the scope of claims 1-22 of U.S. Application 10/791,459 wherein the claims of this application has a broader scope than that of the other application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by De et al (6100751).

Regarding claim1, De et al disclose [see Fig. 4] an apparatus (see **Note** below) comprising: a plurality of devices under test (transistors 54 and 56 or 60 and 62), each device under test (54, 56, 60 and 62) subject to a body bias voltage [known in the prior art as Vbb see col. 3, line 61 and col. 5, lines 6-8 and lines 13-16]; a voltage supply (voltage source 68 or 80) for providing said body bias voltage to said devices under test (54, 56, 60 and 62); and a wiring board (circuit board 50) for coupling said devices under test (54, 56, 60 and 62) and said voltage supply (68 or 80).

[Note: The recitation “*for burn-in testing*” has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).]

Regarding claim 2, De et al disclose said body bias voltage (V_{bb}) is selected to achieve a desired junction temperature at said devices under test (54 and 56 or 60 and 62).

Regarding claim 3, De et al disclose a test controller (voltage control circuitry 72) coupled to said devices under test (54 and 56 or 60 and 62) via said wiring board (50).

Regarding claim 4, De et al disclose a voltage supply (shown as VCC) for providing an operating voltage to said devices under test (54 and 56 or 60 and 62).

Regarding claim 5, De et al disclose said devices under test (60 and 62) comprise positive-channel metal-oxide semiconductor (PMOS) devices [see col. 5, line 1].

Regarding claim 6, De et al disclose said body bias voltage (V_{bb}) is in the range of approximately zero to five volts [see col. 4, lines 19-21].

Regarding claim 7, De et al disclose said devices under test (54 and 56) comprise negative-channel metal-oxide semiconductor (NMOS) devices [see col. 4, line 67-col. 5, line 1].

Regarding claim 8, De et al disclose said body bias voltage (V_{bb}) is in the range of approximately zero to minus ten volts [see col. 5, lines 24-27 and col. 7, lines 5-6].

Regarding claim 9, De et al disclose [see Fig. 4] a method of burn-in testing of a plurality of devices under test (transistors 54 and 56 or 60 and 62), said method comprising applying an operating voltage [via VCC] to said devices under test (54 and 56 or 60 and 62); and applying a body bias voltage (V_{bb}) [via voltage source 68 or 80] to said devices under test (54 and 56 or 60 and 62), wherein application of said body bias voltage (V_{bb}) reduces leakage current associated with said devices under test (54 and 56 or 60 and 62) [see col. 4, lines 26-34].

Regarding claim 10, De et al disclose said body bias voltage (V_{bb}) is selected to achieve a desired junction temperature at said devices under test (54 and 56 or 60 and 62).

Regarding claim 11, De et al disclose said devices under test (60 and 62) comprise positive-channel metal-oxide semiconductor (PMOS) devices [see col. 5, line 1].

Regarding claim 12, De et al disclose said body bias voltage (V_{bb}) is in the range of approximately zero to five volts [see col. 4, lines 19-21].

Regarding claim 13, De et al disclose said devices under test (54 and 56) comprise negative-channel metal-oxide semiconductor (NMOS) devices [see col. 4, line 67-col. 5, line 1].

Regarding claim 14, De et al disclose said body bias voltage (V_{bb}) is in the range of approximately zero to minus ten volts [see col. 5, lines 24-27 and col. 7, lines 5-6].

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shimizu et al (5119337), Hashinaga et al (5406212), Cho (5844429), McClure (6037792 & 6310485), Forbes et al (6104061), Matsou et al (6114866), Leung, Jr. (6157201), Chen (6137301 & 6262588), and Soumyanath et al (6218892) disclose a method and apparatus for a burn-in board testing.

10. Claims 15-20 are allowed over the prior art.

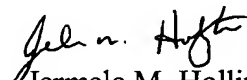
11. The following is a statement of reasons for the indication of allowable subject matter: regarding claim 15, the primary reason for the allowance of the claims is due to the specific combination limitations of a method of burn-in testing comprising accessing a store of information having leakage current indexed by body bias voltage and then selecting the body bias voltage that minimizes leakage current associated with the DUTs. Since claims 16-20 depend from claim 15, they are also allowed.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermele M. Hollington whose telephone number is (571) 272-1960. The examiner can normally be reached on M-F (9:00-4:30 EST) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on (517) 272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jermele M. Hollington
Examiner
Art Unit 2829

JMH
August 28, 2004